ASSEMBLY GUIDE
TOUCHSCREEN 10.1

Contents

1 – Description

Assembly method for Farnell Part No 3263444 - 10.1" IPS HD Resolution Touchscreen Display kit for use with a Raspberry Pi SBC

2 – Parts included in the kit

Part no 3263444 includes the following items.

Item	Description	Quantity
1	10.1" Touch Screen Display assembly	1
2	Cable & Accessory Pack	1
3	HDMI Micro HDMI Cable – Pi4 assembly	1
4	USBA to Micro USB Touch cable	1
5	Internal Power Link Cable	1
6	I2C Interface Cable (optional)	1
7	HDMI~HDMI PCB – Pi3 assembly	1
8	M2.5 Screws	4
9	Standoffs (assembled to TFT Display)	4

Note: You will need to purchase a suitable Raspberry Pi and a recommended power supply to complete the full assembly. Although this product is compatible with all models of Raspberry Pi, for best results we recommend a Raspberry Pi3 or Raspberry Pi4 is used. Items 3 to 8 need to be assembled to the rear of the TFT screen along with your chosen PI.

3 – Package contents

#1 – TFT Display Assembly

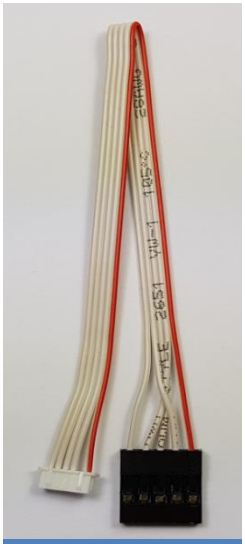
#2 – Cable & Accessory Pack

4 – Cable Accessory Pack Contents

#3 – HDMI~M-HDMI cable-Pi4

#4 –USBA~Micro USB Touch Cable

#5 – Internal Power Link Cable



#6 – I2C Cable

#7 – HDMI~HDMI PCB – Pi3

#8 – M2.5 Screws

#9 – M2.5 Screws Pre-assembled

Note: The cable accessory pack supplied should contain the above listed parts. If any item is missing, please contact your local supplier for support.

5 – Tools required for assembly

This product can be assembled using a Phillips screwdriver (1x100)

6 – Environment and Handling

A clean working environment should be chosen to assemble the kit of parts.

CAUTION: This item is static sensitive, please take precautions to ensure no damage can occur through transmission of any static charge to the circuit board on the rear of the display and associated electronics.

7 – Assembly method

The kit comes part assembled with item #9 (Standoffs), already attached to the rear of the TFT Display interface PCB

For a Raspberry Pi3 assembly you will require item #7 (HDMI~HDMI PCB). In this case item #3 is not used.
For a Raspberry Pi4 assembly you will require item #3 (HDMI ~Micro HDMI cable). In this case item #7 is not used.

An additional cable item #6 (I2C Cable) has been provided to allow I2C connection of the touch interface via the GPIO connectors on the Raspberry Pi. This allows all ports of the Raspberry Pi to be utilised for other peripherals.

Note: Should you require an I2C connection method for the touch panel interface, please contact your local supplier for information on how to connect and install the relevant drivers for this function.

8 - Install Raspbian Image onto an SD Card

Download and install the latest Raspbian image onto a micro SD Card using Win32DiskImager & SD Card reader. This can be downloaded from:

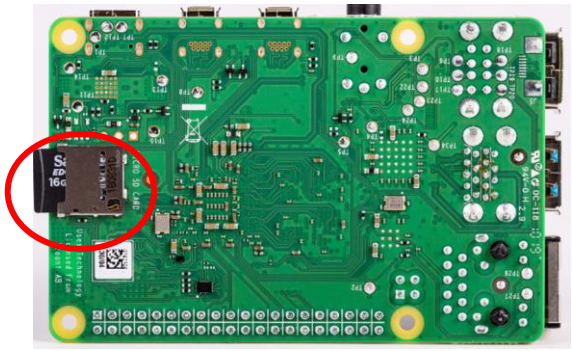
www.raspberrypi.org/downloads/

Follow the instruction on the Raspberry Pi we site for details on how to install the software onto your SD Card

Once installed you will need to locate the SD Card into the Raspberry Pi board as per images below. The SD card is located on the rear of the Raspberry Pi. Figs. A& B, show the location of the SD Card viewed from the top and bottom, respectively.

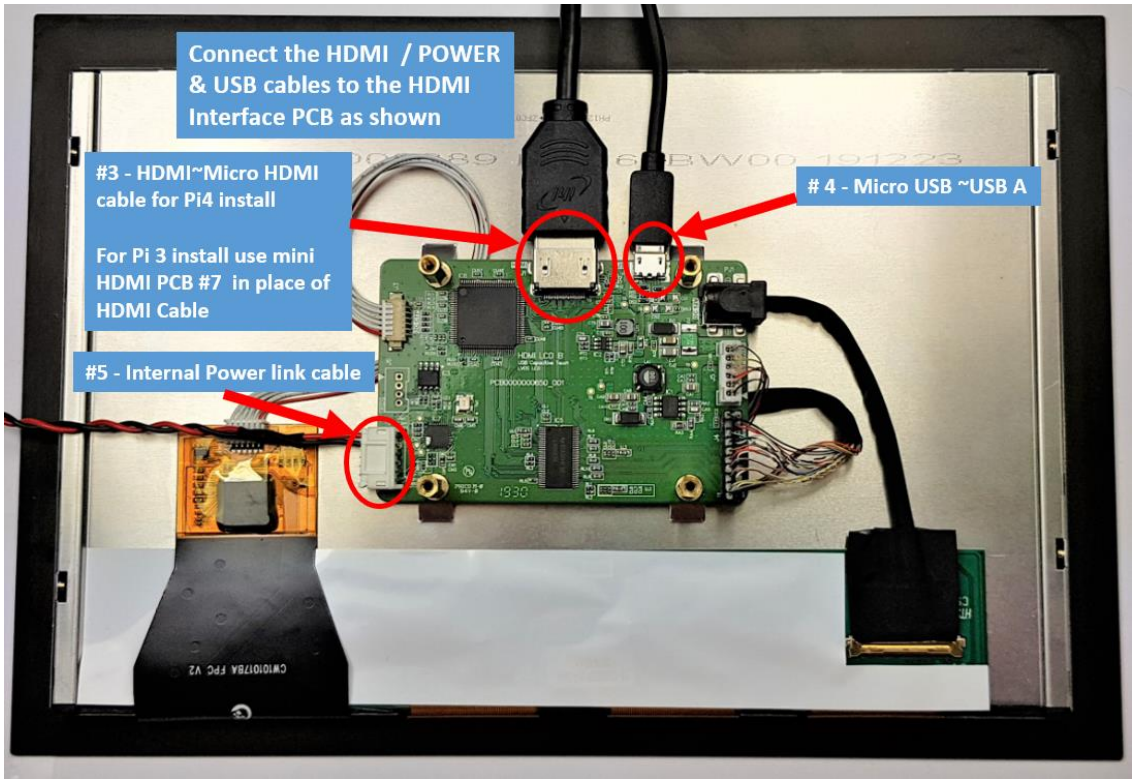
Fig A

Fig B



9 - Unit assembly – Raspberry Pi3/Pi4 Models

Place the TFT assembly (#1) face down onto your worktop with the orange flexi to the bottom left and connect the following cables as per image below. HDMI to Micro HDMI cable (Item #3), USB-A to Micro USB cable (Item #4), Internal Power Link Cable (Item #5)



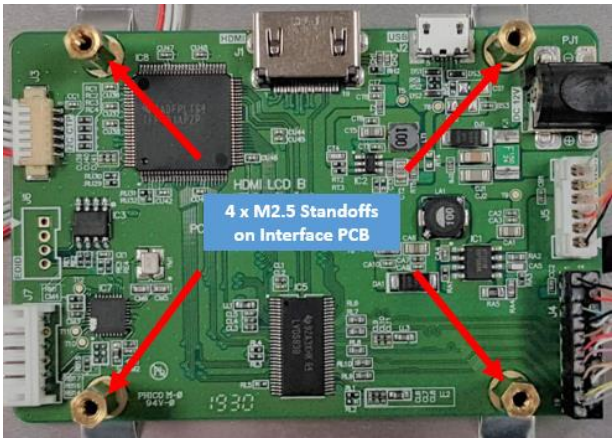
9.1 - Unit assembly – Adding the Raspberry Pi board

Locate your Raspberry Pi on top of the 4 standoffs on the HDMI Board. (see #1 image below)

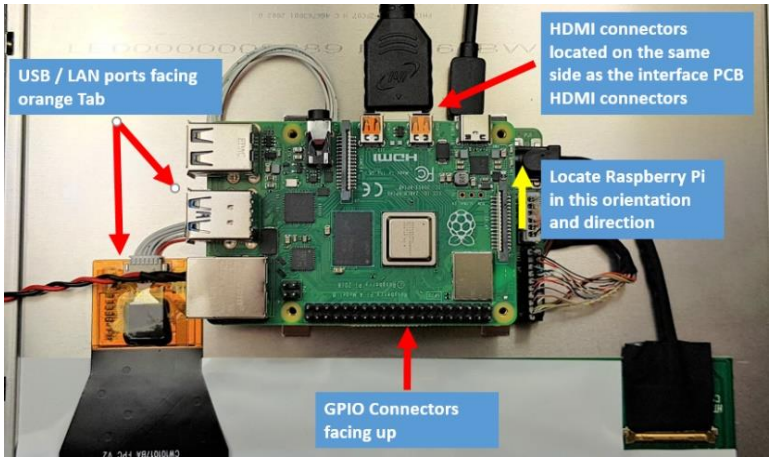
The HDMI Ports on the interface PCB and Raspberry Pi should be facing the same direction. This will position the USB/LAN ports for the PI facing the Orange Flexi and the GPIO Connectors towards the bottom Edge of the screen (See image #2 below)

Note: If you are using a PI3 instead of Pi4, simply orientate the PI3 in the same position as the PI 4 shown below and use the supplied mini HDMI PCB connector (item#7) in place of the Micro HDMI Cable (item#4), to connect from the TFT Panel HDMI connector to the HDMI connector on the Pi3 Board. (image #3 below)

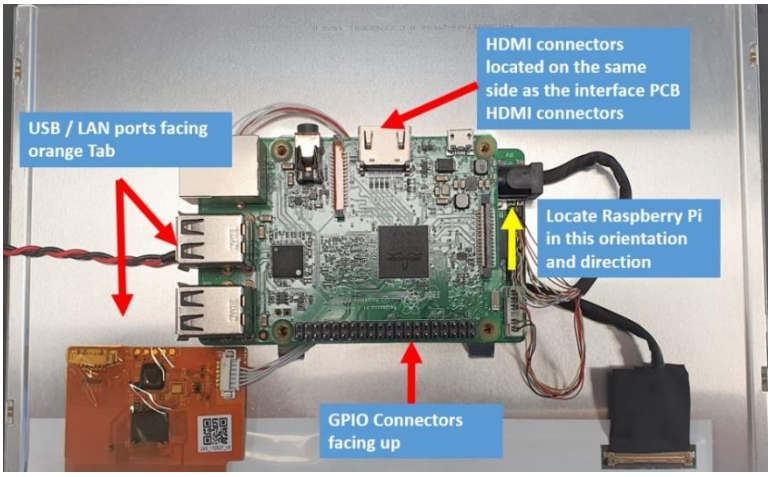
Standoffs x 4 location on interface PCB (#1)



Top View position with PI4 mounted (#2)



Top View position with PI3 mounted (#3)

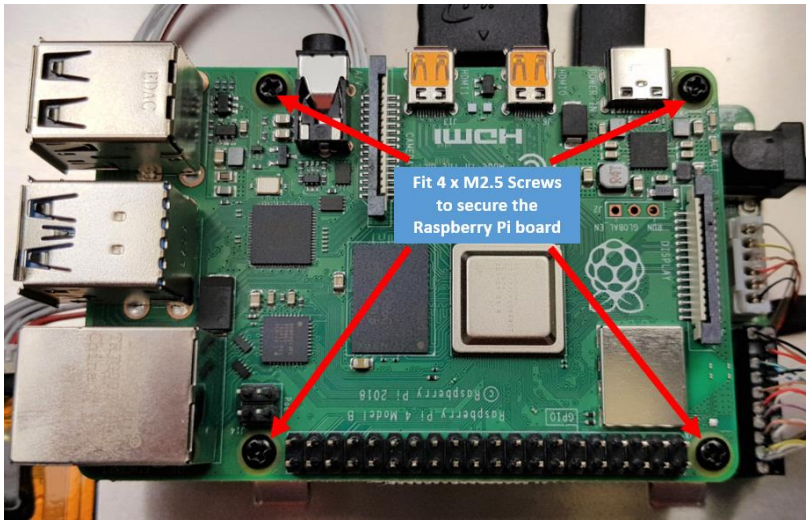


PI3 HDMI PCB Connector (item#7)

9.2 - Unit assembly – Securing the Pi Board

Locate the screw pack (#8) and using the recommended screwdriver, (Phillips 1x100), fix your Raspberry Pi to the standoffs on the rear of the screen assembly with the 4 screws provided. See image below

Raspberry Pi secured to 4 x Pillars

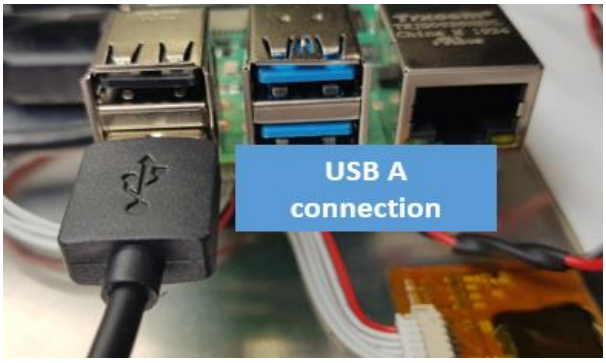


9.3 - Unit assembly – Connecting the Raspberry Pi

For a PI4 assembly connect the opposite ends of the cables attached to the interface PCB to the Raspberry Pi board as follows: Item #3 – micro HDMI connector to HDMI-0: Item #4 USBA connector to one of the PI USB Ports.

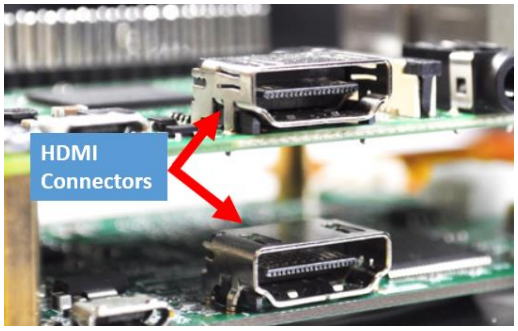
Item #3 – Micro HDMI Connector

Item #4 - USB A Connector

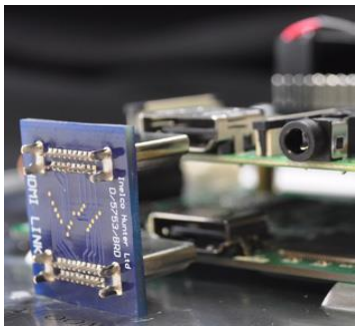


For PI3 installation and connection use item #7 HDMI~HDMI Interface PCB and connect as below:
Locate the two HDMI connectors (as per image #1). Line up the mini HDMI PCB with the two HDMI Sockets on the PI3 and the TFT Interface PCB, (image #2). Push together to make connection. (image #3)

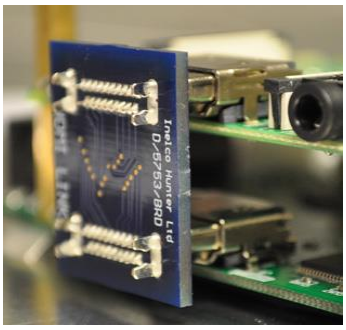
Image #1 – HDMI Connectors



Item #2 - Aligning HDMI PCB



Item #3 – Push to connect



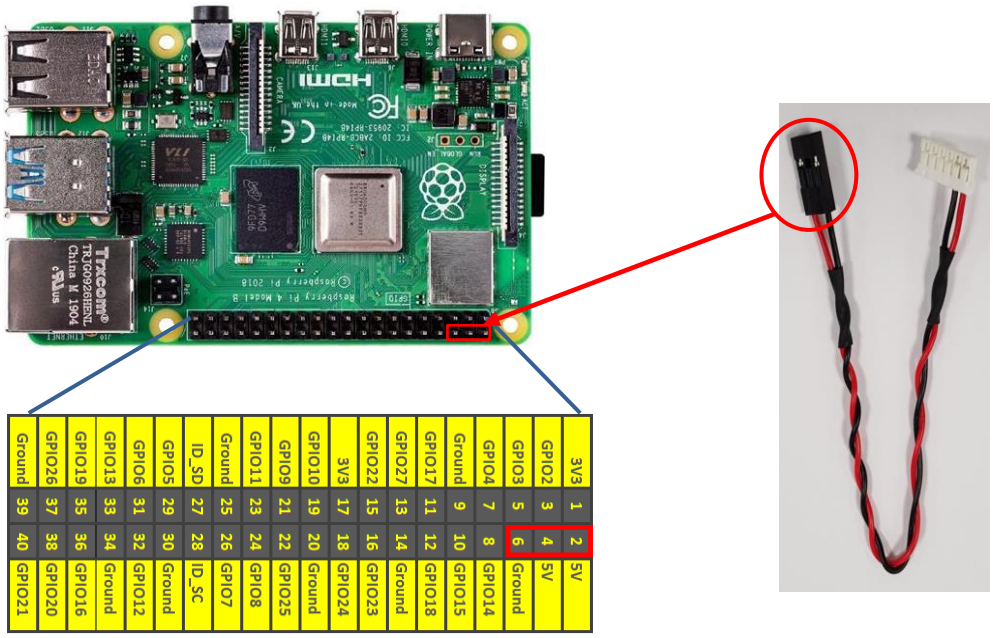
9.4 - Unit assembly – Connecting the Raspberry Pi - Internal Power cable

For ease of installation the TFT touchscreen assembly the Raspberry Pi can be powered from one 2.5A 12Vdc power supply via the barrel power connector on the main TFT HDMI Interface PCB. This power supply can be used for a Raspberry Pi3 or Pi4 model. Farnell Pt 2630905 is certified for this use. (image below)

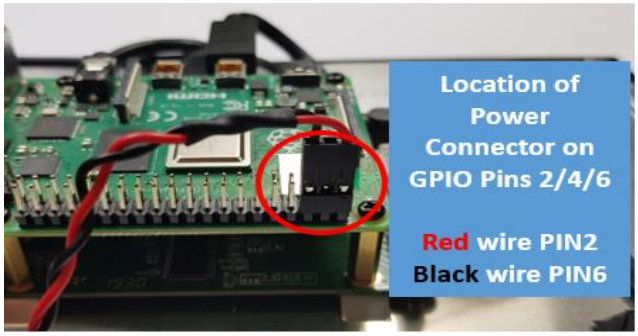
Farnell Pt Nr. 2630905

9.5 - Unit assembly – Setting up the system for single power connection

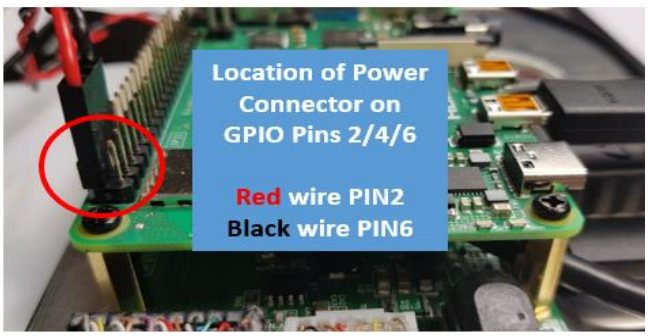
To allow the PI to be powered by the TFT PCB and one power source you will need to connect an internal power link cable between the PI and the TFT Main board. (as described in section 8.0). To complete this connection, locate the black connector from the internal power cable (item #5), and connect to the following GPIO pins on the Raspberry Pi 3 or Raspberry Pi 4, 40-way GPIO connector. (as per images below)



Item#5 – Internal Power Connector

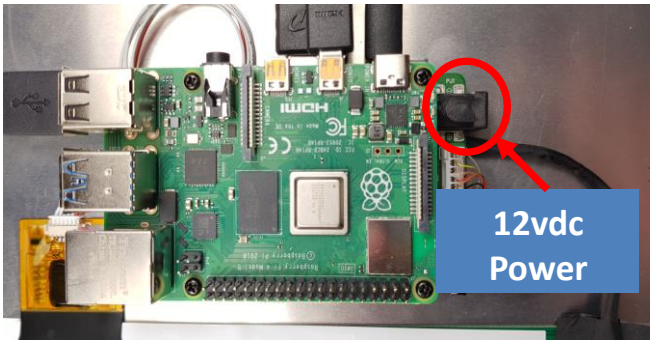


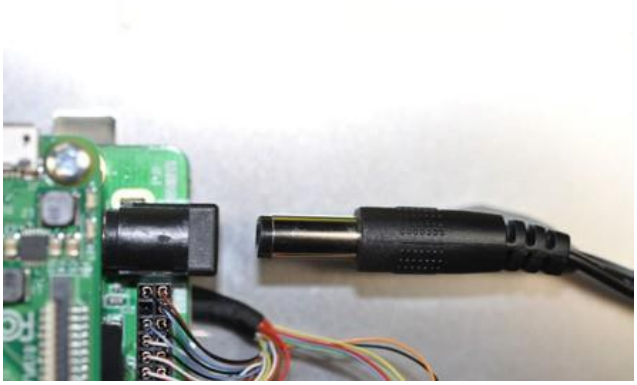
Item #5 – Internal Power Connector (Side view)



10 - Connecting the Power supply

Plug the 12 VDC power supply to the mating barrel connector on the HDMI interface PCB on the rear of the TFT Display assembly. (see images below).

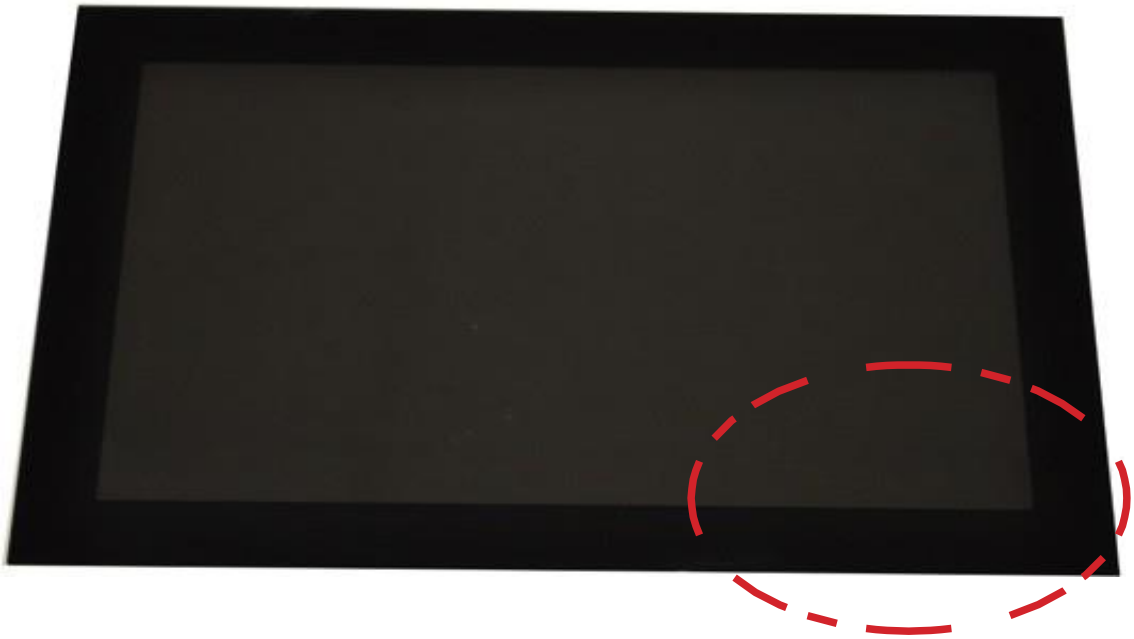




11 - Check connections and apply Power

Check all connections are correct and secure. Rotate the screen into an upright position, (the orange tab will then be located on the rear of the screen in the bottom right hand corner. (see image below)

CAUTION: This product should be placed on a stable, flat, **non-conductive surface** before power is applied and when in use.



Plug the power supply into your mains outlet and turn on. Once power is applied the display system will boot up in Raspbian desktop ready for use. (see image below example).

You can now load your own applications and software as required

12 - Product Safety Information

WARNING:

- This product should only be connected to an external power supply rated at 12V dc, with a minimum current rating of 2.5Amp. Any external power supply used with this display should comply with relevant regulations and standards applicable in the country of intended use.
- This product should be operated in a well ventilated environment and, if used inside a case, the case should allow enough airflow to ensure proper cooling of the product.
- This product should be placed on a stable, flat, non-conductive surface in use and should not be connected by conductive items.
- The connection of incompatible devices to the product connector interfaces may affect compliance and / or result in damage to the unit and invalidate the product warranty.
- All peripherals used in conjunction with this display device should comply with the relevant standards for the county of use and be marked accordingly to ensure that safety and performance requirements are met. These articles include but are not limited to keyboards, mice, Raspberry Pi devices or any other cables that may be connected but not supplied or recommended in the kit of parts.
- Where peripherals are connected that do not include the cable or connector supplied in the kit or recommended, the cable or connector used must offer adequate insulation, protection and operation in order that the requirements of the relevant performance and safety requirements are met for the intended country of use.

TO AVOID MALFUNCTION OR DAMAGE TO YOUR TOUCH SCREEN DISPLAY PLEASE OBSERVE THE FOLLOWING:

- This device is static sensitive. Avoid handling the printed circuit boards whilst the product is powered. Only handle printed circuit boards by the edges to minimise the risk of electrostatic discharge damage. Use anti-static precautions where possible.
- Do not expose to water, moisture or place on a conductive surface whilst in operation.
- Do note expose to direct heat from any source. This touch display solution is designed for reliable operation at normal ambient room temperatures and those specified in our full product specification of -20°C to +70°C operation and -30°C to +80°C storage.
- Do not connect power supplies other than those at the specified rating or damage may occur to the display and the printed circuit boards.
- Handle with care the touch screen interface connector as excessive force may damage the flexible connections.

Raspberry Pi is a trade mark of the Raspberry Pi Foundation

For further information relating to this product guide or assistance with installation of the Raspberry Pi to our touch screen assembly, please contact:

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